



A GUIDE ON HOW TO BE A GREEN AUBite

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PREFACE

Since its establishment, the American University of Beirut (AUB) has been striving to be a model institution of higher learning, service and civic engagement.

AUB cares deeply about responsible and environmentally sustainable resource use and continuously works to teach and demonstrate the theory and practice of sustainability through taking action to understand and reduce the unsustainable impacts of its own activities.

AUB is working towards environmental sustainability through the integration of environment and sustainability concerns into teaching, research, community engagement, the management of the University including greening of infrastructure, facilities, and operations, as well as enhancing student engagement and participation in sustainability activities both within and beyond the University.

AUB faculty, staff and students should lead by example and use environmental sustainability as a criterion for all aspects of University operations. As we continue to seek innovative and lasting solutions to reduce our environmental footprint, we invite you, the most important stakeholder, to be an active part of that journey.

This digital booklet is your tool to sustainable living both on and off campus. It highlights what you as a student can do and what AUB is currently doing to be more environmentally responsible.

It aims to provide tips and insights to help you make small changes in your daily habits that have a big impact on the environment. Please don't print it out, though!

Not every aspect is included in this booklet, and with your help we will enrich the content every year. With your enthusiasm, support, and creativity, we look forward to getting even closer to achieving a shared vision - a truly sustainable University.

Warmly and sustainably,

Farouk Merhebi
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FOOD

Eating conscientiously is one of the biggest ways you can lower your impact on the environment, and there are a lot of ways to do it.

How you can reduce the environmental impact of the food you eat?

1. Buy Local

Buying local means fewer greenhouse gas emissions from transportation and an economic boost to our surrounding community.

2. Eat Fresh Food

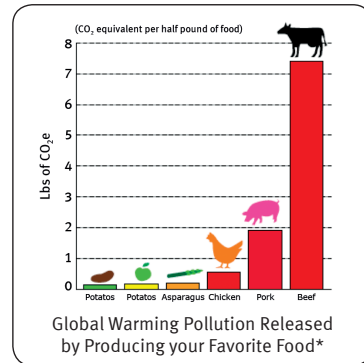
Look for fresh food with the fewest production steps from farm to plate. Freezing, packaging, processing, cooking, and refrigerating food all increase energy use. One study reports that bringing home a frozen bag of carrots has nearly triple the associated global warming pollution relative to purchasing a fresh bunch¹.

3. Eat Organic

Whenever possible, choose organic food. Why? “Organic” is a regulated certification that requires exclusion of all synthetic pesticides, antibiotics, fertilizers, irradiation, and genetic modification from food production.

4. Eat Less Meat

Especially less beef. Replace meat with delicious, nutritious vegetarian and vegan dishes. Think cars emit a lot? Producing just 2.2 pounds of beef generates the same amount of CO₂-e as an average car emits every 60 miles.² Compared to the 25 gallons of water required to produce one pound of wheat, one pound of beef requires 2,400 gallons of water.³



5. Take Only What You Can Eat

Don't load up on food you don't intend on eating. It's a huge waste! The water, energy, and greenhouse gas emissions associated with food are huge, and when food is wasted, those resources are wasted, too.

→ **Go Tray-Less:** An easy way to cut down on waste in the cafeteria. You may buy less food and it saves on washing up.

1 randd.defra.gov.uk/Document.aspx?Document=EVO2007_4601_FRP.pdf

2 Source: www.lightparty.com/Economic/Cooling.html

3 Kreith, Marcia. “Water inputs in California Food production.” National Institute of Livestock and Grassland Science.

TRANSPORTATION

Transport is a major sub-sector contributing to greenhouse gas (GHG) emissions from fuel combustion. Road transportation contributes to 21% of total national emissions. The transport sector is also the main source of carbon monoxide, nitrogen oxides and volatile organic compound emissions.⁴

Reducing Your Transportation Impact on the Environment

1. Walking

AUB promotes safety for pedestrians by designating “Pedestrian Zones” across most of the campus, where vehicle access is restricted. It only takes 10 minutes to get from campus into Hamra commercial center. To encourage walking, the Neighborhood Initiative is working with Bieurt Municipality and many local experts, to renovate Jeanne d’Arc Street to be a model pedestrian-friendly street for the city. Construction will begin in 2016.

2. Biking

A fast and enjoyable way to get nearly anywhere! Remember to always use a bike lock! Wear a helmet for every ride, and follow the rules of the road.



3. Car Pooling

Share the ride! Carpooling is when two or more commuters ride together in a private automobile on a continuing basis, regardless of their relationship to each other or the cost of sharing agreements.

Some websites are available to facilitate carpooling in Lebanon such as:

- www.lebanoncarpooling.com
- www.autopooling.com

Apps are available to help students carpool such as:

- “bbepp”: a project by Lawen Ray7in: a campaign to increase ridesharing. (www.bbepp.com)
- Carpolo: (carpolo.co)

4. Using hybrid cars

Hybrid cars use an internal combustion engine like conventional cars—and can be fueled like normal cars—but have an electric motor and battery, and can be partially or wholly powered by electricity.

By using both a conventional engine and electric motor, the best hybrid cars achieve better fuel efficiency, pollute less and save drivers money through fuel savings.

5. Using public transportation

It is well-known that public transportation in Lebanon is unreliable, and is operated with minimum resources in terms of buses and staff.

4 MoE, UNDP, GEF (2011). Lebanon’s Second National Communication to the United Nations Framework Convention on Climate Change.

However, there are public buses operating on nine regular routes as shown in the following table.

Public buses' routes and timing

Route	Starting time	Frequency
1. Dora- Qarantina- Al Nahr bridge- National Museum- Adlieh- Barbir- Cola- Raouche- Ain el Mreisseh- Port- Qarantina- Dora	7:00 AM from Dora	Every 90 minutes from Dora
2. Hamra- Unesco- Cola- Beirut Arab University- Chatila- Autostrade Hadi Nasrallah- Kafaat- Faculty of Science Lebanese University- Regie and back	6:00 AM from Lebanese University 6:20 AM from Hamra	Every 30 minutes
3. Cola- Al Madina el Riayadiya- Kuwaiti Embassy- Ouzai- Khaldeh- Saadiyat- Jieh (using old coastal road)- Saida rest house- Saints coeurs- Grand Serail- Al forn al Arabi and back	6:00 AM from Cola 6:00 AM from Saida	Every 30 minutes
4. Cola- Kuwaiti Embassy- Ouzai- Khaldeh- Aramoun- Bchamoun- Aitat- Souk el Ghareb- Bayssour and back	6:00 AM from Bayssour 7:00 AM from Cola	Every 30 minutes
5. Nahr el Mawt- Jdeideh- Al Fanar (kafaat)- Mont La Salle- Mansourieh- Beit Mery- Broumana- Baabdat- Dahr el Sawan Public Hospital and back	6:30 AM in both ways	Every 45 minutes
6. Cola- National Museum- Adlieh- Furn El Chebbak (Sami el Solh)- Chevrolet- Galerie Semaan- Al Sayyad- Ministry of Defense- Jamhour- Araya- Dahr el Wahch- Aley souks- Ain El Jdideh- Bhamdoun	6:30 AM in both ways	Every 45 minutes
7. (1) Cola- National Museum- Adlieh- Furn El Chebbak (Sami el Solh)- Chevrolet- Galerie Semaan- Al Sayyad- Ministry of Defense- Jamhour- Bsous- Souk El Ghareb- Aitat- Baisour- Remhala and back (2) Cola- Al Madina el Riayadiya- Kuwaiti Embassy- Ministry of Labor- Galerie Semaan- Jamhour- Araya- Chwit- Abadieh and back	6:30 AM from Cola	Every 90 minutes
8. Dora- Tripoli (Al Nour Square) and back	6:00 AM from Tripoli	Every 3 hours
9. Dora- Bourj Hammoud- Nabaa- Chalouhy roundabout- Saloumi roundabout- Al Hayek roundabout- Chevrolet- Galerie Semaan- Hazmieh- Hadath- Hadath square- Antonine University- Baabda- Serail Baabda- Baabda public hospital and back	7:00 AM in both ways	Every 30 minutes

WASTE

Three Ways to Waste Less

Remember the three R's? Here are some new tips for you.

1. **Reduce**
2. **Reuse**
3. **Recycle**

Things You Can Reduce

Single-use cups, lids, bottles

- Bring your own mug and water bottle

Plastic bags

- Bring your own bag everywhere

Paper napkins and towels

- Use fewer of them or use cloth rags instead

Things You Can Reuse

- Plastic Utensils
- Plastic Containers
- Paper (*Use the other side as a blank canvas for printing or for jotting down notes*)
- Notebooks (*At the end of the quarter, tear out the remaining paper to use!*)
- Water Bottles
- Paper and Plastic Bags
- Aluminum Foil

How to Buy Secondhand

Why buy new when you can get so much of what you need from other sources? By buying secondhand, you'll save resources and money.

Find, buy, and sell nearly everything on websites, such as:

- ExpatAds.com (www.expatads.com)
- OLX Liban (olxliban.com/en)
- Facebook group Second Hand Beirut (www.facebook.com/groups/219669251495890)
- Facebook group Garage Sale (www.facebook.com/groups/Garagesalelebanon)

You can also visit the public product catalog of AUB which includes items to be sold by auction for personal/external use (www.aub.edu.lb/sco).

WASTE

There are several initiatives to improve waste segregation and recycling on campus as described below.

ReVa

ReVa is an innovative recycling solution for the recycling of plastic bottles and aluminum cans in exchange for rewards.

6 ReVa (reverse vending machines) for recycling plastic bottles and tin cans are available at AUB at the following locations:

- Ada Dodge Cafeteria
- Olayan School of Business
- Charles Hostler Student Center
- Penrose Hall
- Boustani Hall
- AUBMC cafeteria



Points can be collected for recycling and a redemption scheme is available to reward recyclers. More info about the redemption scheme can be retrieved at the following link: www.aub.edu.lb/facilities/ehsr/Document/Redemption%20Scheme%20-%20GMI-REVA.pdf

Red and Blue Program

AUB launched the Red and Blue Program for recycling. The use of these two colors provides an identification system that makes it easy for students, faculty and staff to remember. Recycling boxes are distributed all over the campus and are labeled with the main information about the material to be thrown in the bins.



Red Bins are dedicated to recycle plastic bottles and containers, glass bottles, and jars, as well as tins and cans. These items include water and beverage bottles, detergent and bleach bottles, plastic containers, and pastry trays.

Blue Bins are designed for papers and cardboard wastes such as newspapers and magazines, books and copy books, brochures, leaflets, greeting cards and envelopes, egg boxes, and toilet roll tubes.

Instructions of the Red and Blue program can be obtained from the following link: www.aub.edu.lb/facilities/ehsr/Document/Red%20and%20Blue%20instructions.pdf

Batteries

Batteries are collected in 11 locations on campus and are disposed of by encapsulation in cement blocks.

A map showing the locations of the different recycling bins on campus can be found on the following link www.aub.edu.lb/facilities/ehsr/Document/AUB%20CAMPUS-BINS-Model.pdf.

WATER

AUB is located in a country that despite its relatively high per capita water endowment (1,000 m³/capita), is already using 2/3 of its available water resources.⁵ This level of water use is high by global standards, and there is significant groundwater mining. AUB's annual water footprint amounts to 133,206 Kgal or what is equivalent to 11.7 kgal/capita/year and 0.05 kgal/ft².

Several initiatives are being undertaken to reduce water consumption on campus such as replacing regular water fixtures with water sense and low flow ones, using brackish water in toilets and for irrigation, using drip irrigation and planting drought and salt resistant plant species, using the water from the backfilter of the pool in toilets and applying rainwater harvesting. More efforts can be made to further reduce water consumption.

Relative to other universities, AUB's water consumption per capita remains in the middle range and when comparing water consumption per area (square feet) among different universities, AUB's water consumption is closer to the higher end.

Water Saving Tips

Luckily, there are many easy ways to conserve water in the residence halls and in apartments:

Turn off the water when brushing your teeth

Turning off the water while brushing your teeth can save up to 9.5 liters/minute.

Take shorter showers

Every minute less you spend in the shower saves up to 7.6 liters of water. Think also about lowering your water pressure using the sliding handle on many showers and using less hot water.

Do only full loads of laundry

If you don't have enough laundry for a full load, combine loads with your roommate.

Fix or report leaky faucets

If you see a leaky faucet, let Physical Plant Helpdesk know by calling extension 2015.

⁵ World Bank, 2012. Lebanon Country Water Sector Assistance Strategy 2012-2016.

ENERGY

Your house, room, or apartment is the easiest place to begin making a positive impact on energy reduction. There are simple ways to reduce your home's energy usage—and convince your peers to make eco-friendly changes.

How to Save Energy When...

1. Using your computer



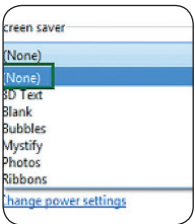
Reduce how much you print out

Laser printers use around 450 watts of power while printing. Instead, try to use e-documents. Or, if it's short, write it down on scrap paper.



Enable the sleep/standby mode

Even better, TURN IT OFF! The average computer can typically use 50–150 watts of power, but only one to six watts when in sleep/standby mode.



Don't use a screen saver

Screen savers are NOT energy savers. In fact, screen savers use just as much energy as when you are actively using your computer.

2. In your room

Turn everything off when you leave

When you leave your room, turn off lights, TVs, computers, and anything else that is plugged in. This will help you save energy that you don't need to use when you aren't in the room! You can save hundreds of watts of power by doing this.

Use cold water to wash your clothes

You can do this by selecting "Bright Colors" on machines. According to EnergyStar.gov, hot water heating accounts for about 90% of the energy your machine uses to wash clothes. Only 10% goes toward the electricity used by the washer motor.

Reduce your use of heating and A/C

You might not need any at all! Use heating or A/C even less while you're asleep and turn it off when you leave the room. You can also opt for using a fan instead of A/C and an extra blanket or layers instead of heating.

When using air conditioning or heating, make sure that your windows are tightly shut. If you're too hot while the heater is running, turn it off (if you can). Opening the window will cause the heater to work harder, making your room even hotter.

Lighting

Study under natural daylight whenever you can! If you need light during the day, open up your shades before flipping the light switch. If you bring any of your own lamps to school, be sure to buy energy efficient ones.

Reduce the length of your showers

If you reduce your shower time by just two minutes, you can conserve up to 2,500 gallons of water each year. In addition, you save energy by reducing the amount needed to heat the water up.

PURCHASING

Every product has a carbon footprint—an amount of carbon emissions associated with its production and distribution. Moreover, many products have impacts on other aspects of the environment, such as natural resources like water and trees. Here are some tips for reducing the environmental impact of your purchases.

Before purchasing

Try to answer the following questions:

- Do you really need it?
- Will you use it?
- Can you upgrade an existing product instead of buying a new one? (Refurbish your PC, refill ink cartridges.)
- Does it serve multiple purposes? (All-in-one printer, copier, scanner combo).
- Can you borrow it?
- Can you find it used?

When buying

Try to buy in bulk. This reduces wasteful packaging and is usually more cost-effective.

- Look for eco-friendly cleaning products and detergents.
- When purchasing appliances like microwaves or mini-fridges, look for items that are Energy Star rated.
- Buy rechargeable batteries.
- Buy reusable instead of disposable items.
- Buy products made of recycled materials and easily recyclable.
- Buy durable products.
- Buy products with less packaging.
- Buy products that are less toxic, contain low or no Volatile Organic Compounds, Bisphenol A (BPA) free plastic.
- Buy compostable products.
- For lighting, buy energy efficient lights.
- For clothing, look for organically grown fibers and water-based inks.
- Use reusable shopping bags. Bring your bag with you.

Read the Label

- Many products claim to be “eco-friendly” or “sustainable” without any verification and often without much of an actual positive environmental impact.
- Look for accredited logos from third-party agencies, rather than general claims like “natural”.

- Here are some reliable logos to look for while shopping:



The Design for the Environment label (DfE) allows consumers to quickly identify products that can protect the environment.



Products bearing the WaterSense label are about 20% more efficient than other similar products and provide measureable water savings.



Energy Star appliances meet energy efficiency guidelines set by the EPA and U.S. Department of Energy.

OTHER SUSTAINABLE PRACTICES

Note taking

- Try taking notes electronically on your laptop (they're much harder to lose)! If you need to buy notebooks, look for notebooks and other school supplies made from recycled materials. 100% post-consumer content for paper is best.
- If you like to take notes on the lecture handouts, don't print them! You can take notes electronically on PDFs of lecture slides with programs like Microsoft OneNote or Adobe Acrobat.
- Save all the scratch paper you can get your hands on—and reuse them for note taking.

Printing

- Reduce paper use. When possible, submit papers and assignments electronically. If you do need to print something, always print double-sided or on the back of scratch paper.
- Try to print in “economy” mode; this saves ink and is usually just as legible as the more wasteful ink settings.
- Preview your documents to eliminate excess white space and dangling sentences. Make sure you're not printing any more pages than necessary.
- If you do need to get rid of an old ink cartridge, recycle it!

Maintaining Hydration:

- Invest in a reusable water bottle and mug!
- Avoid buying plastic water bottles. Plastic water bottles are highly wasteful. Recently, accumulation of plastic trash in seas has created huge islands of trash, mostly made up of plastics, which is harming aquatic life. Recycling plastics is also difficult and labor intensive. It's a lose-lose situation with plastic water bottles!

Becoming part of the solution

- Encourage your friends and family to adopt more sustainable and green practices.
- Participate in awareness raising events about greening the campus and the neighborhood.
- Organize green events.

